

# Trends

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Review Article

### **The Impact of Family Stress and Resilience on Child Development: a scope review**

Marília M. Mendes-Sousa, Marina B. Perrone, Rafael B. de Melo, Marcos V. V. Ribeiro, Qiong Chao, Carolina Torres, Zila M. Sanchez, Pamela J. Surkan, Silvia S. Martins, Thiago M. Fidalgo, Sheila C. Caetano

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## **The Impact of Family Stress and Resilience on Child Development: a scope review**

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**Abstract**

Introduction: Children grow up spending most of their time within the family social environment, where they can experience stressful situations such as marital conflict, a non-cohesive environment, parental alcohol use disorder, parental depression, and other parental mental health issues. All these factors are associated with children's developmental delays. Objective: We aimed to conduct a scoping review on family stress and family resilience associated with child development delays to examine familial conditions associated with child development. Methods: We conducted a scoping review of observational studies published between January 2000 to July 2023, indexed in MEDLINE and LILACS databases. We included observational studies that evaluated the history of exposure to violence, and behavioral or emotional symptoms, or mental health problems among children aged 4-12. Data were independently extracted using a structured form. Results: Database searches identified 12,990 different records. A total of 43 articles were included in the review. Three main findings emerged: (1) parental mental health problems, especially depressive symptoms in mothers, were associated with child developmental delays and mental health problems; (2) better parenting practices and cohesive home environment were positively associated with child development, and (3) Vulnerable social environments (e.g., poverty and housing insecurity) may be linked to child mental health problems. Conclusions: Studies reviewed show that promoting better family dynamics and increasing family cohesion, as well as parenting abilities, are beneficial to a child's socio-emotional development and prevention of child mental health problems. Moreover, increasing family and children's resilience improves the quality of life within family units.

*Keywords:* family stress, resilience, child development.

Negative experiences and adverse exposures in early childhood increase the risk of poor social, cognitive, and health outcomes.<sup>1,2</sup> These outcomes could lead to further problems in competence, autonomy, and independence later in life.<sup>3</sup> Children spend most of their time within the social environment of their families, where they may be exposed to stressful situations such as marital conflict, harsh parenting, non-cohesive environments, and parental mental health disorders, such as depression and alcohol use disorder.<sup>4,5,6</sup> All these factors are associated with developmental delays in children.<sup>7,8</sup>

Protective factors for children's socioemotional development have also been studied.<sup>1,9,10</sup> Resilience has been defined as a successful adaptation or functioning in the context of adversity. It occurs in an individual, familial, or community capacity, and it is associated with social capital and the social environment.<sup>11,12</sup> Well-adapted parent-child relationships (e.g., affective and supportive) and parental social support can mitigate some problems in developing children's mental health, minimizing the effects of exposure to violence.<sup>13</sup>

Most studies on child development have evaluated the roles of family stress and child resilience separately in small clinical samples.<sup>14,15,16</sup> This study aimed to (i) conduct a scoping review on how stress and resilience factors related to the family environment are associated with socioemotional child development delays and emotional and behavioral problems; and (ii) examine family conditions, such as marital conflicts and parental support, associated with child development and child mental health problems.

## Methods

We conducted a scoping review of studies published between January 1<sup>st</sup>, 2000, to July 31<sup>st</sup>, 2023, indexed in MEDLINE and LILACS databases. The following inclusion criteria were adopted: studies that (i) included children aged 4-12 years (population); (ii) with adverse family emotional conditions (exposure); and (iii) evaluated the impact of these conditions on child's socioemotional child development, including child behaviors, emotions and mental health (outcome). Only quantitative studies written in English or Portuguese were included. Exclusion criteria were: (i) study samples with clinical medical conditions, including specific development disorders such as Autism spectrum disorder (ASD) or Attention-deficit/hyperactivity disorder (ADHD) or Learning Disorders; (ii) studied in non-familial environments such as nurseries; (iii) samples in schools reporting teachers' perception or only academic outcomes, or; (iv) studies with fewer than 100 participants, in order to include studies with higher chances of having strengthened findings that studies with smaller sample size could not identify.

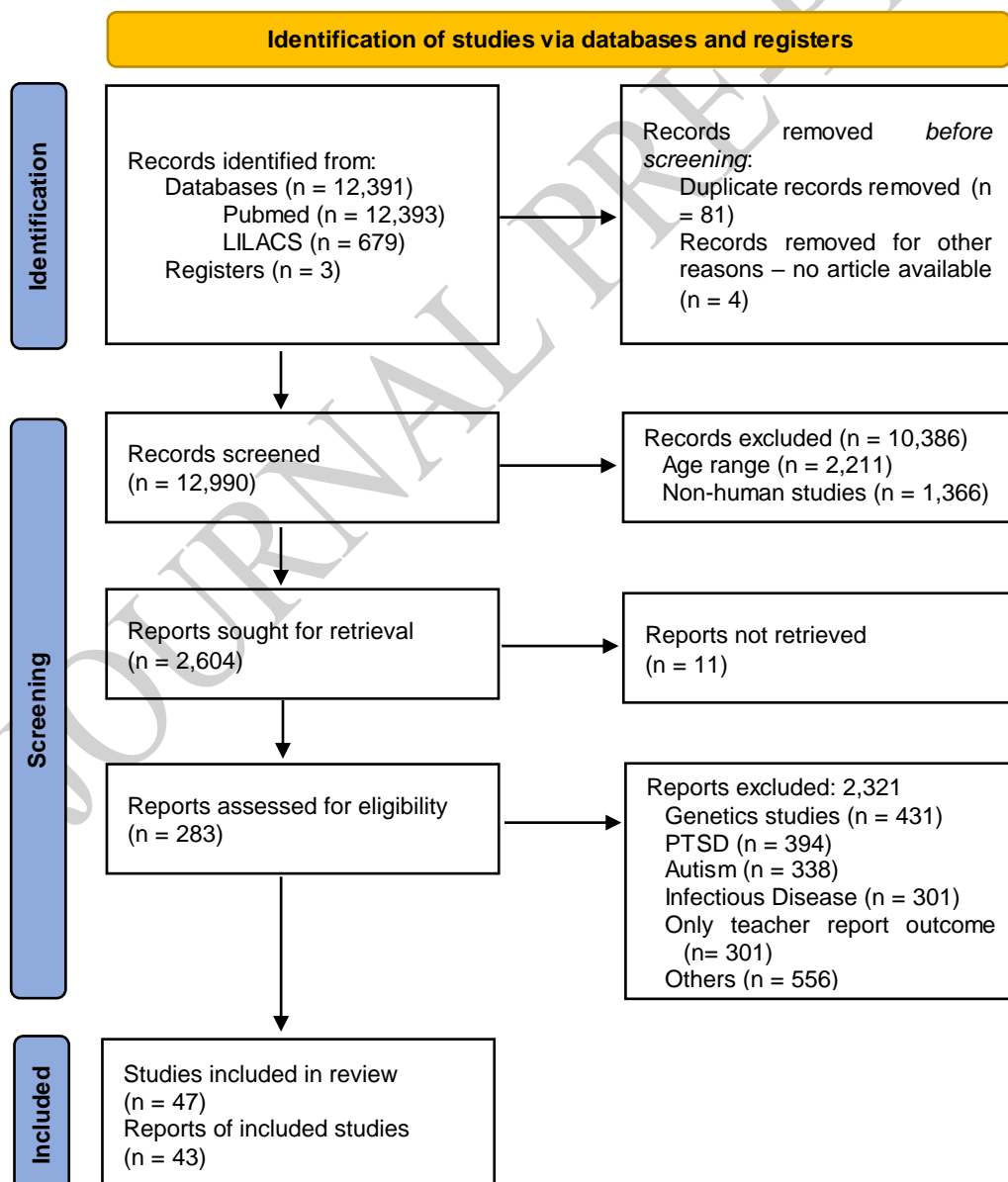
Our search strategy was: “(*family OR parent*) AND (*resilience OR stress*) AND (*child development*)” in order to capture all related observational studies. In order to assess the grey literature, references of included articles were also reviewed for additional articles. Besides that, other relevant articles were identified by contacting experts in the field who suggested additional articles screened for eligibility. No reference manager was used, and the first authors of the paper were responsible for summarizing all information reviewed, with the supervision of both senior authors.

We present the PRISMA flow diagram for our review in Figure 1. Database searches identified 13,075 records. We removed 85 duplicate records, leaving 12,990 articles to screen for eligibility criteria. The main reason for exclusion during

the title and abstract screening, full-text screening, **evaluation of relevance**, and data extraction stages was that the papers were not directly related to our aims. They discussed breastfeeding, school environment, nurseries, **solely neurobiological studies**, clinical medical conditions (**e.g., infectious diseases**), ASD, and ADHD. The remaining 43 articles were included in the review.

**Figure 1.**

*PRISMA Flow Diagram of the scoping review of the Impact of Family Stress and Resilience on Child Development*



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71

The articles were independently evaluated by the four authors [REDACTED], [REDACTED], responsible for data extraction using a structured form. The following information was collected: (i) author and year of the study; (ii) country where the study was conducted; (iii) sample size; (iv) sample detailed characteristics; (v) age range of the sample; (vi) analysis conducted; (vii) instruments used; (viii) outcome measures; (ix) major findings; and (x) study limitations. Discrepancies were solved by consensus or consulting the senior authors [REDACTED] when necessary. Information was then analyzed qualitatively. No bias or quality scale was used.

This review was registered at PROSPERO under the number CRD42017068397, and PRISMA guidelines were followed.

## Results

### Study Sample

Slightly more than half (53.47%) of the studies were conducted in the United States. Other studies were from the United Kingdom (6.97%), China (6.97%), Israel (4.65%), Canada (4.65%), Germany (4.65%), Thailand (2.33%), the Netherlands (2.33%), Finland (2.33%), Belgium (2.33%), Australia (2.33%), Peru (2.33%), Guyana (2.33%) and Portugal (2.33%). Study designs were: cross-sectional (n= 13, 30.22%) or longitudinal (n=30, 69.78%). The sample sizes varied between 102 and 21,527. Child emotional and behavior problems (62,79%) and child development delays (18,61) were the primary outcomes in most studies.

### **Cross-sectional Studies**

Cross-sectional studies details are presented in Table 1. The 13 cross-sectional studies were published between 2004 and 2023, and the number of participants included varied between 116 and 21,527.<sup>17,53</sup> Risks for developmental delays were assessed in three of these studies, but no standardized instrument was used.<sup>18,21,22</sup> Positive parenting practices such as family meals and singing or reading to children were associated with better child development.<sup>18,20,49,51</sup> Adverse family environments that included child maltreatment and neglect were associated with social and emotional developmental delays.<sup>19,20</sup> Parents' excessive use of mobile devices can impair their ability to respond to children's emotional cues and regulate their behavior.<sup>54</sup>



**Table 1***Cross-sectional Studies — Family vs Child Development (n = 13)*

LEGEND: BDI: Beck Depression Inventory; CBCL: Child Behavioral Checklist; **CCNES: Coping with Children's Negative Emotions Scale**; CES-D: Center of Epidemiological Studies-Depression Scale; **CPPSC-SF: Chinese Parental Psychological Control Scale Short Form**; CSOC: Children's Sense of Coherence Scale; **DERS: Difficulties in Emotion Regulation Scale**; DQ: Demographic Questionnaire; EXT: Externalizing problems; **FACES III: Family Adaptability and Cohesion Evaluation Scale**; **FACES-IV: Family Adaptability and Cohesion Scale**; INT: Internalizing problems; **JVQ: Juvenile Victimization Questionnaire**; **K6: Kessler Psychological Distress Scale**; LS-H: Loneliness Scale - Hebrew adaptation; MLiR: Multiple Linear Regression; MLR: Multiple logistic regression; **MPMS: Maternal and Paternal Marital Satisfaction**; **NIPI: Nurturant-involved parenting inventory**; NLSCY: National Longitudinal Survey of Children and Youth; **PA: Path Analysis**; **PBS: Parent Behavior Scale**; **PAS: Parent-Child Attachment Scale**; PDA: Poor developmental attainment; PEDS: Parents' Evaluation of Developmental Status Questionnaire; **PHQ-9: Patient Health Questionnaire-9**; PPVT-R: Peabody Picture Vocabulary Test—Revised; **PS: Phubbing Scale**; **PSI-SF: Parenting Stress Index—Short Form**; **PSQ: Prosocial Skills Questionnaire**; **RCTS: Revised Conflict Tactics Scale**; **RRC-ARM: Resilience Research Centre-Adult Resilience Measure**; RSQ-FS: Responses to Stress Questionnaire-Family Stress version; SCID: Structured Clinical Interview for DSM; **SDQ: Strengths and Difficulties Questionnaire**; SEM: Structural Equation Modeling; SES: Socioeconomic Status; **SRZQ: Self Report Zygosity Questionnaire**; TONI-3: Test of Nonverbal Intelligence; **VS.: versus**; YSR: Youth Self-Report scale; **ZQYT: Zygosity Questionnaire for Young Twins**; ↑: higher or increased; and ↓: lower or decreased.

Authors, year	Country	Sample Size	Sample Details	Age Range in years	Analysis	Instruments	Outcome Measure	Major Findings	Study Limitations
Vreeland et al. <sup>17</sup>	USA	117	Mothers and their children from USA Southeast community	9–15	MLR	<ul style="list-style-type: none"> <li>• CBCL + YSR</li> <li>• RSQ-FS</li> <li>• SCID</li> <li>• BDI</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescent <b>INT &amp; EXT</b></li> <li>• Adolescent coping and stress reactivity</li> <li>• Maternal depressive symptoms and diagnosis</li> </ul>	<ul style="list-style-type: none"> <li>• Youth's coping and stress reactivity moderated association between current maternal depressive symptoms and youth symptoms</li> <li>• Maternal depressive symptoms: <ul style="list-style-type: none"> <li>◦ associated with youth's <b>INT &amp; EXT</b> when youth used low (vs. high) levels of control coping</li> <li>◦ associated with youth symptoms for those with ↑ stress reactivity &amp; involuntary disengagement</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Sample limited regarding range of maternal education and income (i.e., primarily middle and upper SES)</li> <li>• No information on severity and chronicity of maternal history of depression and other types of psychopathology</li> </ul>
Cprek et al. <sup>18</sup>	USA	21,527	National Survey of Children's Health 2011/2012	1-5	MLR	<ul style="list-style-type: none"> <li>• PEDS</li> </ul>	<ul style="list-style-type: none"> <li>• Parent-reported risk of developmental, behavioral or social delays</li> </ul>	<ul style="list-style-type: none"> <li>• Positive parenting practices correlated with child's risk of developmental, social or behavioral delays, in a dose-response relationship</li> </ul>	<ul style="list-style-type: none"> <li>• Recall and social desirability biases: ↑ Positive parenting practices</li> <li>• Scores calculated: parent concerns of delay</li> </ul>
Price et al. <sup>19</sup>	USA	177	Home environments of maltreated and non-	4-6	Hierarchical regression analyses	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• Post-Visit Inventory</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Child EXT</b></li> </ul>	<ul style="list-style-type: none"> <li>• Family environments of physically abused children: ↑ negative social interactions</li> <li>• Home environments of neglected children: ↓ organized &amp; clean</li> </ul>	<ul style="list-style-type: none"> <li>• No information on maltreatment status at evaluation time</li> </ul>

			maltreated children					<ul style="list-style-type: none"> <li>• Predict <b>EXT</b>: physical abuse, mother's negative behavior toward the child, aggression between siblings, home not organized or clean</li> </ul>	
Sharabi et al., <sup>20</sup>	Israel	287	Grades 5–6 from five elementary schools	10-11	MANOVA Hierarchical regression analyses	<ul style="list-style-type: none"> <li>• LS-H</li> <li>• CSOC</li> <li>• FACES III</li> <li>• Hope Scale</li> <li>• Effort Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Loneliness</li> <li>• Sense of coherence</li> </ul>	<ul style="list-style-type: none"> <li>• Children in cohesive families: ↓ loneliness and ↑ personal strengths</li> <li>• Children in rigid &amp; non-cohesive family: ↑ loneliness and ↓ coherence</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of children's perceptions of the family dimensions, and not their parents' perception</li> </ul>
Nanthamongkolchai et al., <sup>21</sup>	Thailand	320	Child caregivers for the past six months	6-12	MLR	<ul style="list-style-type: none"> <li>• TONI-3 test</li> <li>• Child Rearing Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Development of children</li> </ul>	<ul style="list-style-type: none"> <li>• Children reared by a grandparent: 2x more chance of having delayed development <b>vs.</b> those reared by parent</li> </ul>	<ul style="list-style-type: none"> <li>• Non standards instruments</li> </ul>
To et al., <sup>22</sup>	Canada	4,987	Canadian NLSY	1-5	MLR	<ul style="list-style-type: none"> <li>• PPVT-R</li> <li>• CES-D</li> </ul>	<ul style="list-style-type: none"> <li>• <b>PDA</b></li> </ul>	<ul style="list-style-type: none"> <li>• ↑ risk of PDA: one-year-old with ↓ birthweight, being male, having immigrant mother</li> <li>• ↑ risk of PDA: 4-5 years old with immigrant mother &amp; mother with low educational attainment</li> <li>• Predictor of PDA across all ages: ↓ income</li> </ul>	<ul style="list-style-type: none"> <li>• PDA tests used verbal skills: mothers who were immigrants may be disadvantaged</li> </ul>
Zhang et al. <sup>48</sup>	China	777	Two-parent families and their school-age children	10-15	SEM	<ul style="list-style-type: none"> <li>• Net family income per capita</li> <li>• Family debt-to-asset ratio</li> <li>• Economic pressure</li> <li>• K6</li> <li>• MPMS</li> <li>• NIPI</li> <li>• Child Self-Concept</li> </ul>	<ul style="list-style-type: none"> <li>• Economic pressure</li> <li>• Parental emotional distress</li> <li>• Marital satisfaction</li> <li>• Nurturant-involved parenting</li> <li>• Child emotional distress</li> <li>• Child self-concept</li> </ul>	<ul style="list-style-type: none"> <li>• Economic pressure &amp; parental emotional distress: role in the connection between family economic difficulties &amp; child emotional distress</li> <li>• Parents' emotional distress: mediator between economic adversities and children's emotional well-being (particularly in rural families)</li> </ul>	<ul style="list-style-type: none"> <li>• Economic pressure: assessed by single question</li> <li>• Important constructs not included (e.g., marital conflict)</li> <li>• Constructs of marital satisfaction &amp; emotional distress: responses from only one parent</li> <li>• Limitations in generalizing to other cultures and contexts</li> </ul>
Miller-Graff et al. <sup>49</sup>	Peru	385	Caregiver-child dyads	4-17	MLiR	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• DQ</li> <li>• JVQ</li> <li>• PSQ</li> <li>• FACES-IV</li> <li>• PBS</li> <li>• RRC-ARM</li> <li>• PHQ-9</li> </ul>	<ul style="list-style-type: none"> <li>• Child adjustment difficulties</li> <li>• Children's prosocial skills</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ child victimization: ↑ child adjustment problems</li> <li>• ↑ caregiver depression &amp; harsh parenting practices: ↑ child adjustment problems</li> <li>• ↑ caregiver depression: ↑ child prosocial skills</li> <li>• ↑ positive parenting, caregiver resilience, and family cohesion: ↑ child prosocial skills: ↑ environmental promotive factors</li> <li>• Family cohesion predicted child prosocial behaviors</li> </ul>	<ul style="list-style-type: none"> <li>• Limitations of single informants</li> <li>• Reporting bias</li> <li>• No information on caregiver physical abuse</li> <li>• Diverse age range of children</li> </ul>

Roopnarine et al. <sup>50</sup>	Guyana	196	Mother-preschool child dyads	3-5	PA (mediating roles)	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• CES-D</li> <li>• RCTS</li> <li>• Physical assault subscale</li> <li>• Constructive conflict behaviors between couples</li> <li>• Partner Social Support</li> </ul>	<ul style="list-style-type: none"> <li>• Constructive conflict behaviors</li> <li>• Maternal depressive symptoms</li> <li>• Intimate partner violence</li> <li>• Child INT &amp; EXT</li> </ul>	<ul style="list-style-type: none"> <li>• Constructive conflict behaviors partially mediated the link between maternal depressive symptoms and EXT.</li> <li>• Maternal depressive symptoms &amp; physical intimate partner violence: related to EXT.</li> <li>• Families with ↑ partner social support: constructive conflict behaviors appeared to be more effective in ↓ EXT.</li> </ul>	<ul style="list-style-type: none"> <li>• Data collection during COVID-19 pandemic: could have ↑ depressive symptoms &amp; physical intimate partner violence</li> <li>• Reports of children's INT &amp; EXT not obtained from teachers</li> <li>• No data on social support offered by friends, relatives, and community.</li> </ul>
Nikstat et al. <sup>51</sup>	Germany	2,089	Twin pairs & families from 2 twin birth cohorts (ages 11 and 17) in Wave 1 of the German TwinLife study of social inequalities	1,043 11yo twin pairs 1,046 17yo twin pairs	Confirmatory factor analyses	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• 16 indicators of family environment (e.g., SES, positive parenting)</li> <li>• ZQYT</li> <li>• SRZQ</li> </ul>	<ul style="list-style-type: none"> <li>• Vantage sensitivity model</li> <li>• Positive parental moderators</li> <li>• Child INT</li> </ul>	<ul style="list-style-type: none"> <li>• Indicators of family environment derive 4 dimensions: positive parenting, negative parenting, lack of parental resources, and SES</li> <li>• Mechanism of gene-environment interaction with increasing nonshared environmental variance for ↑ adverse and ↓ propitious family conditions</li> <li>• In preadolescence, parenting behavior: greater moderating influence on INT vs. family conditions (e.g., SES)</li> </ul>	<ul style="list-style-type: none"> <li>• Nonshared environmental variance component may contain measurement error</li> <li>• Nonlinear G × E models results suggest that family environments might not moderate genetic and environmental variance linearly</li> <li>• Factor scores for positive &amp; negative parenting included individual data for both twins: possibility of inflated false positives</li> <li>• INT: self-reports</li> </ul>
Cui et al. <sup>52</sup>	China	150	parent-child dyads	6-12	PA	<ul style="list-style-type: none"> <li>• PSI-SF</li> <li>• DERS</li> <li>• CCNES</li> <li>• CPPSC-SF</li> </ul>	<ul style="list-style-type: none"> <li>• Associations between parents' perception of child difficulty / emotion dysregulation and parents' supportive / unsupportive reactions to children's negative emotions</li> <li>• Relationships between parents' perception of child difficulty, parents' emotion dysregulation, and parents' psychological control behavior concerning children's thoughts and guilt induction</li> </ul>	<ul style="list-style-type: none"> <li>• Perceived child difficulty: ↓ parental supportive reactions</li> <li>• Parental emotion dysregulation: ↑ parental unsupportive reactions</li> <li>• Interaction between perceived child difficulty &amp; parental emotion dysregulation predict psychological control</li> <li>• Parental emotion dysregulation exacerbated effect of perceived child difficulty on parental psychological control</li> </ul>	<ul style="list-style-type: none"> <li>• Self-reported bias</li> <li>• Observed psychological control: ↓ variability and not related to child outcomes</li> <li>• Generalization limitations</li> <li>• Need for broader measures of child characteristics</li> <li>• Role of siblings or other family members in influencing parenting dynamics: not considered</li> </ul>
Watson et al. <sup>53</sup>	USA	116	Mothers and their children	9-15	MLR	<ul style="list-style-type: none"> <li>• CBCL + YSR</li> <li>• BDI-II</li> <li>• RSQ-PS</li> <li>• Observational Coding System for Maternal</li> </ul>	<ul style="list-style-type: none"> <li>• Child INT</li> <li>• Association between coping socialization messages &amp; INT</li> <li>• Moderation by maternal depressive symptoms &amp; peer stress</li> </ul>	<ul style="list-style-type: none"> <li>• Child peer stress: positively correlated with INT</li> <li>• Maternal depressive symptoms: <ul style="list-style-type: none"> <li>◦ positively correlated with INT</li> <li>◦ moderate link between coping messages &amp; self-reported INT</li> </ul> </li> <li>• At ↑ maternal depressive symptoms: ↓ maternal guidance on primary control</li> </ul>	<ul style="list-style-type: none"> <li>• Sample limitations</li> <li>• Coding system for analyzing coping messages: requires additional validation</li> <li>• No data on how parents influence coping responses from infancy through adulthood</li> </ul>

						Coping Socialization Messages			
Lv et al. <sup>54</sup>	China	988	Mothers of young children	3-6	PA (mediating and moderating roles)	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• PS</li> <li>• PAS</li> <li>• PSI-SF</li> </ul>	<ul style="list-style-type: none"> <li>• Maternal phubbing</li> <li>• Mother-child attachment</li> <li>• Parenting stress</li> <li>• Emotional &amp; behavioral problems in children</li> </ul>	<p>and secondary control coping - had children with ↑ INT</p> <ul style="list-style-type: none"> <li>• At ↑ peer stress, mothers who encouraged less secondary control coping had children with ↑ INT</li> <li>• Mothers' phubbing: negatively associated with child emotional &amp; behavioral problems</li> <li>• Parents' phubbing: negatively affected parent-child relations and children's emotions</li> <li>• Maternal parenting stress moderated relation between mother-child attachment and children's emotional &amp; behavioral problems</li> <li>• Mother-child attachment mediated relation between mother phubbing and child emotional &amp; behavioral problems</li> </ul>	<ul style="list-style-type: none"> <li>• Mother self-report data</li> </ul>

Note. Table prepared by the authors.

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## Longitudinal Studies

Thirty studies had a longitudinal design, all published between 2000 and 2023.<sup>1,2,5-8,10,11-16,23-30,55-65</sup> The length of follow-up in these studies ranged from 1 to 10 years. The number of waves varied from 1 to 6. Child Behavioral Checklist (CBCL, n= 13), Strengths and Difficulties Questionnaire (SDQ, n= 6), Center of Epidemiological Studies-Depression Scale (CES-D, n= 5), and Child Depression Inventory (CDI, n= 5) were the most used instruments.<sup>1,2,5-7,10,11,14,16,23-27,56,58,60-65</sup>

Almost half (43.33%) of these studies reported associations between parents with depression and child internalizing symptoms and behavioral problems.<sup>2,5,6,8,11,12,16,25-28,56,63</sup> Poor marital relationships negatively affected the parent-child interactions and were associated with developmental delays and internalizing or externalizing problems.<sup>1,2,4,5,15,16,28,58,62,65</sup> Also, problematic drinking has been associated with marital aggression.<sup>8,24</sup> Keller et al.<sup>8</sup> found that this combination seems to lead to the development of adverse reactions to conflicts and low expectations for their children's future. The authors also emphasized that children tend to develop sad reactions related to their mothers with alcohol-related problems and anger reactions to their fathers.

Violence or punishment practices associated with the family environment have also been studied.<sup>5,11,27,60,61</sup> Parental negligence and violence were associated with externalizing problems and negative social interactions in their children, and decreased home organization and cleanliness.<sup>2</sup> Specific to girls, maladaptive marital conflict was associated with internalizing problems. When presented with one or more scenarios depicting interparental conflicts, 88% of the children reported a caregiving response. These caregiving responses were categorized as follows: offering comfort (37%), providing assistance (31%), and mediating the situation

(63%).<sup>62</sup> Nonetheless, adolescents who experienced greater interparental conflict during their childhood exhibited heightened negative emotional reactivity in response to family conflicts.<sup>58</sup>

Dubowitz et al.<sup>11</sup> found that 48% of their 943-children sample presented adequate levels of resilience. These resilient children had less history of maltreatment, caregivers with fewer depressive symptoms, and less unemployed. Households with a small number of people tended to have more resilient children. Savage-McGlynn et al.<sup>12</sup> found a mother's positive perspective toward the parenting role favored resilience to the adverse effects of postnatal depression. They also found that 15-month old children who were more able to communicate non-verbally had a higher likelihood of being resilient at 11 years old. In the same direction, positive maternal feelings about parenting and good child non-verbal communication at 15 months increased the likelihood of later adequate resilience levels.

Details of the longitudinal studies are presented in Table 2.

**Table 2**

*Longitudinal studies — Family vs Child Development (n = 30)*

LEGEND: **ACE: Adverse Childhood Experience**; ASA: Attachment Script Assessment; AAPI: Adult-Adolescent Parenting Inventory; ALEQ: Adolescent Life Events Questionnaire; ALSPAC: Avon Longitudinal Study of Parents and Children; ANOVA: analysis of variance; AQS-3: Attachment Q-Set version3; **ARS: Academic Rating Scale**; BDI: Beck Depression Inventory; **BDI-II: Beck Depression Inventory-II**; BDIST: Battelle Developmental Inventory Screening Test; **BPM: Brief Problem Monitor**; CBCL: Child Behavioral Checklist; **CBS: Child Behavior Scale**; CDI: Child Depression Inventory; CCSC: Children’s Coping Strategies Check list – modified version; **CDS: Child Development Supplement**; CES-D: Center of Epidemiological Studies-Depression Scale; **CFSS: Children’s Food Security Scale**; CIB: Coding Interactive Behavior; CPIC: Children’s Perception of Interparental Conflict Scale; CPS: Conflict and Problem-Solving Scales; CRI: Conflict Resolution Inventory; CIDI-SF: Composite International Diagnostic Interview Short Form; **CPT: Continuous Performance Task**; **CRPBI: Child Report of Parenting Behavior Inventory**; CSI-4: Child Symptom Inventory 4; DCI: Dyadic Coping Inventory; DESC: Divorce Event Schedule for Children; **DFSCA: Drug Free Schools Outcome Study Questions**; **DPAS: Deviant Peer Affiliation Scale**; **EC: Executive Control**; ECBQ: Early Child Behavior Questionnaire; **EC-HOME: Early Childhood HOME Observation for Measurement of the Environment**; EPDS: Edinburgh Postnatal Depression Scale; EOI: Emotional overinvolvement in parents’; **EXT: Externalizing problems**; **FCA: Foundational Cognitive Abilities**; **FCS: Family Conflict Scale**; FMSS: Five Minute Speech Sample; **FPST: Family Problem-Solving Task**; GHQ-28: General Health Questionnaire-28; HOME: Home Observation for Measurement of the Environment; **INT: Internalizing problems**; **IPST: Interparental Problem-Solving Task**; LCA: Latent class analysis; **LISRES: Life Stressors and Social Resources Inventory**; LONGSCAN: Longitudinal Studies of Child Abuse and Neglect; **LSDQ: Loneliness and Social Dissatisfaction Questionnaire**; MANOVA: Multivariate analysis of variance; MCDI: MacArthur Communicative Development Inventory; MCQ: Marital Communication Questionnaire; **MFES: Moos Family Environment Scale**; MLR: Multiple logistic regression; **MSSTB: MacArthur Story Stem Battery**; **NCE: Neighborhood Collective Efficacy**; **NCP: Neighborhood Concentrated Poverty**; NES-SEFQ-SF: Negative Expressive subscale of Self-Expressiveness in the Family Questionnaire, short form; NICHD SECCY: National Institute of Child Health and Human Development Study of Early Child Care and Youth Development; **NLSAH: National Longitudinal Study of Adolescent Health**; NRI: Network of Relationships Inventory; **NSCAW-II: National Survey of Child and Adolescent Well-Being**; **OPS: O’Leary-Porter Scale**; **NTCB: NIH Toolbox Cognition Battery**; PAES: Parental Alcohol Experiences Scale; PALES: **PhenX Adverse Life Events scale**; PERI-D: Psychiatric Epidemiology Research Interview—Demoralization Scale; **PRQ: Parenting Relationship Questionnaire**; PSI: Parent Stress Index; RCMAS: Children’s Manifest Anxiety Scale–Revised; RRPS: Rutter Revised Preschool Scales; **RSQ-PS: Responses to Stress Questionnaire-Peer Stress version**; **SCID: System for Coding Interactions in Dyads**; **SCID-DSM-IV: Structured Clinical Interview for the DSM-IV**; SDQ: Strengths and Difficulties Questionnaire; SEM: Structural Equation Modeling; SES: Social Economical Status; SILS: Shipley-Hartford Institute of Living Scale; SIMS-PR: Security in the Interparental Subsystems Scale; **SSB-A: Story Stem Battery for Adolescents**; STAI: State-Trait Anxiety Inventory; **STRS: Student-Teacher Relationship Scale**; **SSRS: Social Skills Rating System**; **SWPS: Satisfaction With Parenting Scale**; TOF: Test Observation Form; UCLA-LSIC: UCLA Life Stress Interview for Children; VBD-WPPSI-III: Vocabulary and Block Design sub-test of Wechsler Preschool and Primary Scale of Intelligence-III; **VEX-R: Violence Exposure Scale for Children**; **WJ-III: Woodcock-Johnson-III**; **WJMT: Woodcock-Johnson Memory Test**; WPPSI-R: Wechsler Preschool and Primary Scale of Intelligence – Revised; **WSCS: Work-Family Conflict Scale**; YSR: Youth Self-Report scale; ↑: higher or increased; and ↓: lower or decreased.

Author, year	Country	Sample Size	Sample Details	Age Range in years	Analysis	Instrument	Outcome Measure	Major Findings	Study Limitations
Zemp et al. <sup>1</sup>	Germany	809	German Family Panel (pairfam) study	7-16	LCA	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• DCI</li> <li>• NRI</li> <li>• MCQ</li> <li>• CRI</li> </ul>	<ul style="list-style-type: none"> <li>• Child <b>INT &amp; EXT</b></li> <li>• Interparental interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Parents in ↓ positivity and ↑ negativity interaction: ↑ <b>INT</b></li> <li>• Parent– child conflict predicted initial <b>INT &amp; EXT</b></li> </ul>	<ul style="list-style-type: none"> <li>• Couple behaviors: measured by reports of the anchors about their partners’ behavior</li> <li>• 2-year time lag between measurement occasions: too long</li> </ul>

Ramchandani et al. <sup>2</sup>	UK	13,351	Participants from ALSPAC	3-5	SEM MLR	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• EPDS</li> <li>• RRPS</li> </ul>	<ul style="list-style-type: none"> <li>• Child behavior problems</li> <li>• Child INT</li> </ul>	<ul style="list-style-type: none"> <li>• Paternal depression: couple conflict and maternal depression, which lead to poor children's outcome</li> <li>• Maternal postnatal depression: affect children through direct mother-infant interaction &amp; care</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of antisocial traits: scales not validated</li> <li>• Response rates: lower for fathers</li> </ul>
Choi & Becher <sup>5</sup>	USA	1,773 nonmarital families	Fragile Families and Child Well-being study		SEM	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• Economic hardship</li> <li>• CIDI-SF</li> <li>• Parenting stress</li> <li>• Supportive coparenting</li> <li>• Parent Child Conflict Tactics Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Child EXT</li> <li>• Harsh Parenting</li> <li>• Supportive Coparenting</li> <li>• Parenting Stress</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ supportive coparenting: associated with ↓ child behavioral problems and less harsh parenting.</li> <li>• Maternal depressive symptoms: indirectly and positively related to harsh parenting practices and child behavior problems, transmitted through supportive coparenting and parenting stress acting as mediator</li> <li>• Older maternal age: protective for supportive coparenting</li> </ul>	<ul style="list-style-type: none"> <li>• Interviewed one member of the coparenting relation</li> <li>• Not rule out the effects of broader environmental systems (school, nonparent caregivers, health care systems, public assistance, neighborhood characteristics, community resources)</li> <li>• Coparenting scale does not capture several domains of coparenting (e.g., exposure to conflict, undermining)</li> </ul>
Cummings et al. <sup>6</sup>	USA	235	Community families from South Bend & Rochester and surrounding areas	5-6	SEM	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• CES-D</li> <li>• NES-SEFQ-SF</li> <li>• SIMS-PR</li> </ul>	<ul style="list-style-type: none"> <li>• Child INT</li> <li>• Child's emotional insecurity</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ depressive symptoms on both mother and father <ul style="list-style-type: none"> <li>◦ ↑ INT</li> <li>◦ positive correlation with child's negative emotional expressiveness and insecurity</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Parents' reports of their children's INT may be biased</li> </ul>
Letourneau et al. <sup>7</sup>	Canada	10,033	Canadian National Longitudinal Survey of Children and Youth	2-11	MLR	<ul style="list-style-type: none"> <li>• CES-D</li> </ul>	<ul style="list-style-type: none"> <li>• Child development in cognitive and behavior domains</li> </ul>	<ul style="list-style-type: none"> <li>• Children of depressed mothers: ↑ risk of low receptive vocabulary, displaying inattention, physical aggression</li> <li>• Mothers who experienced depression continuously or when child ≥ 2-3 years: ↑ risk of poor emotional development</li> </ul>	<ul style="list-style-type: none"> <li>• Self-report biases</li> </ul>
Keller et al. <sup>8</sup>	USA	235	Community sample of families living in midsize towns and their surrounding areas	children in kindergarten	SEM	<ul style="list-style-type: none"> <li>• PAES</li> <li>• CPS-Verbal Aggression and Physical Aggression</li> </ul>	<ul style="list-style-type: none"> <li>• Child emotional insecurity</li> </ul>	<ul style="list-style-type: none"> <li>• Greater parental problem drinking <ul style="list-style-type: none"> <li>◦ children's negative emotional reactions to conflict</li> <li>◦ ↑ negative expectations for the future</li> <li>◦ indirectly associated with child reactions to marital aggression</li> </ul> </li> <li>• Mother problem drinking: ↑ sad reactions</li> <li>• Father problem drinking: ↑ anger reactions</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty to generalize results</li> <li>• Single indicators of each construct</li> </ul>
Fletcher et al. <sup>10</sup>	Australia	2,620	Longitudinal Study of Australian Children Depression: both parents	4-5	MLR	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• Derived Outcome Indices</li> </ul>	<ul style="list-style-type: none"> <li>• Child behavior problems</li> <li>• Social and emotional development</li> </ul>	<ul style="list-style-type: none"> <li>• Early paternal depression: predict poorer child outcomes for ↓ development and well-being score</li> </ul>	<ul style="list-style-type: none"> <li>• Biased sample (highly educated subjects, with high income, and high full-time job)</li> </ul>
Dubowitz et al. <sup>11</sup>	USA	943	LONGSCAN	4-6	MLR	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• BDIST</li> <li>• WPPSI-R</li> <li>• CES-D</li> </ul>	<ul style="list-style-type: none"> <li>• Functioning in behavioral, social, and developmental domains</li> </ul>	<ul style="list-style-type: none"> <li>• Resilient: 48% sample</li> <li>• Resilient children: ↓ history of maltreatment, ↓ caregiver with depressive symptoms, ↑ smaller households, ↑ employed caregivers</li> </ul>	<ul style="list-style-type: none"> <li>• Genetics or psychosocial interventions may have influenced outcomes</li> <li>• Defined competencies and resilience in varying ways: specific normative threshold or relation to other in sample</li> </ul>



Savage-McGlynn et al. <sup>14</sup>	UK	6,500	Pregnant women, living in the former ALSPAC	8 months-12 years	SEM	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• EPDS</li> <li>• MCDI</li> <li>• HOME</li> </ul>	<ul style="list-style-type: none"> <li>• Normative behavior development</li> </ul>	<ul style="list-style-type: none"> <li>• Poor outcomes: child maltreatment and caregiver depressive symptoms</li> <li>• Mother's positive perspective parenting role: ↑ development of resilience to the adverse effects of postnatal depression</li> <li>• 15-month-old who were more able to non-verbally communicate: ↑ likelihood resilient at 11-year-old</li> <li>• Maternal positive feelings about parenting and child non-verbal communication at 15 months: ↑ likelihood of later resilience.</li> </ul>	<ul style="list-style-type: none"> <li>• EPDS: not a diagnostic instrument</li> <li>• Measures: based on maternal with ALSPAC sample</li> <li>• Sample not representative of UK population</li> </ul>
Brock et al. <sup>15</sup>	USA	102	Two-parent community families from US Midwest	2-10	Bootstrapping sampling Nonparametric resampling	<ul style="list-style-type: none"> <li>• CPS</li> <li>• AQS-3</li> <li>• CSI-4</li> <li>• ECBQ</li> </ul>	<ul style="list-style-type: none"> <li>• Child <b>INT</b></li> <li>• Maladaptive conflict</li> </ul>	<ul style="list-style-type: none"> <li>• Maladaptive marital conflict: ↑ <b>INT</b> for girls</li> <li>• Negative emotional aftermath of conflict: ↑ <b>INT</b> for boys &amp; girls</li> </ul>	<ul style="list-style-type: none"> <li>• Small sample size</li> <li>• Sample was relatively ethnically homogenous and low in risk</li> </ul>
Hazel et al. <sup>16</sup>	USA	692	3rd, 6th, 9th grade, followed every 3 months for 1 year	7-16	Mixed effect models	<ul style="list-style-type: none"> <li>• CDI</li> <li>• NRI</li> <li>• ALEQ</li> </ul>	<ul style="list-style-type: none"> <li>• Youth depressive symptoms</li> <li>• Stressful life events</li> <li>• Peer stress</li> </ul>	<ul style="list-style-type: none"> <li>• Parent relationship quality moderated relationship of person level fluctuations in peer stressors</li> <li>• Association between peer stressors and ↑ in depressive symptoms in youth with ↓ positive parental relation</li> </ul>	<ul style="list-style-type: none"> <li>• Relationship quality: measured only at baseline and reported by only one parent</li> <li>• Other stressors (e.g., health stressors): not evaluated</li> </ul>
Kok et al. <sup>23</sup>	Netherlands	1,800	Generation R Study and NICHD SECCYD	0-17.5	SEM	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• Ainsworth's scales for Sensitivity &amp; Cooperation</li> <li>• Erickson scales for Supportive presence &amp; Intrusiveness</li> </ul>	<ul style="list-style-type: none"> <li>• Child <b>INT</b></li> <li>• Maternal sensitivity</li> </ul>	<ul style="list-style-type: none"> <li>• Maternal sensitivity and <b>INT</b>: associated during preschool years</li> </ul>	<ul style="list-style-type: none"> <li>• Sample not representative, with no Hispanic participants</li> <li>• Mothers' characteristics influence validity of child perception</li> </ul>
Sandler et al. <sup>24</sup>	USA	162	Mothers divorced no longer than 2 years	9-12	SEM	<ul style="list-style-type: none"> <li>• CBCL + YSR</li> <li>• DESC</li> <li>• PERI-D</li> <li>• CPIC</li> <li>• CCSC</li> <li>• CDI</li> <li>• RCMAS</li> </ul>	<ul style="list-style-type: none"> <li>• Child <b>INT</b></li> <li>• Psychological problems</li> </ul>	<ul style="list-style-type: none"> <li>• Active coping efforts: ↑ efficacy of coping</li> <li>• Coping efficacy <ul style="list-style-type: none"> <li>○ mediate active coping efforts &amp; psychological problems of children of divorce</li> <li>○ mediate active coping and <b>EXT</b> and ↓ <b>INT</b></li> </ul> </li> <li>• Indirect effect: active coping → ↓ symptom intercept for child reports</li> </ul>	<ul style="list-style-type: none"> <li>• Active coping and efficacy of other ways coping may overlap and lead to misinterpretation</li> </ul>
Chan et al. <sup>25</sup>	USA	171	40% mothers: depression-spectrum disorder during child's lifetime	8-12	MLR	<ul style="list-style-type: none"> <li>• SCID-DSM-IV</li> <li>• CDI</li> <li>• UCLA-LSIC</li> </ul>	<ul style="list-style-type: none"> <li>• Dependent family stress</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline level of depressive symptoms predicted generation of dependent family stress 1 year later</li> <li>• Chronic strain &amp; family factors influence stress generation process</li> </ul>	<ul style="list-style-type: none"> <li>• Follow-up time point: entered the pubertal transition</li> <li>• Memory biases</li> </ul>
Leinonen et al. <sup>26</sup>	Finland	527	Children's mental disorders in Finland	12	ANOVA	<ul style="list-style-type: none"> <li>• CBCL + YSR</li> <li>• GHQ-28</li> <li>• CDI</li> </ul>	<ul style="list-style-type: none"> <li>• Child adjustment mental health</li> </ul>	<ul style="list-style-type: none"> <li>• Parental mental-health problems <ul style="list-style-type: none"> <li>○ compromise parenting abilities</li> <li>○ threat to children's adjustment</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Small effect sizes</li> <li>• Only children in early adolescence</li> </ul>

Black et al. <sup>27</sup>	USA	194	Born when their mother ≤ 19 years and were living with their biological mothers	4-5	MLR	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• CES-D</li> <li>• APGAR</li> <li>• AAPI</li> <li>• BDIST</li> </ul>	<ul style="list-style-type: none"> <li>• Child INT &amp; EXT</li> <li>• Child development</li> </ul>	<ul style="list-style-type: none"> <li>• ↑ EXT among the highest risk group: maltreated children &amp; children with mothers with depressive symptoms</li> <li>• ↓ EXT: children living with mothers in own house (often also living with father), children who had not been maltreated &amp; who had mothers with ↓ depressive symptoms</li> </ul>	<ul style="list-style-type: none"> <li>• Single-parent families not included</li> <li>• Specific measure of quality of all relationship among different family members not included</li> </ul>
Vakrat et al. <sup>28</sup>	Israel	1,983	2nd post birthday Jan/02 – Mar/05, completed at least 12 years of education, cohabitating with infant's father	0-12	MANOVA	<ul style="list-style-type: none"> <li>• BDI</li> <li>• STAI</li> <li>• SCID-DSM-IV</li> <li>• CIB</li> </ul>	<ul style="list-style-type: none"> <li>• Dyadic interaction</li> <li>• Parent sensitivity</li> <li>• Parent intrusiveness</li> <li>• Child social engagement</li> <li>• Triadic family interactions</li> <li>• Family cohesion</li> </ul>	<ul style="list-style-type: none"> <li>• Maternal depression: ↓ parent sensitivity, ↑ parent intrusiveness, ↓ child social engagement with parent, ↓ family cohesion</li> <li>• Parental sensitivity: ↓ parental intrusiveness, ↓ child engagement with mother</li> <li>• Maternal sensitivity: associated with father sensitivity and child social engagement with father</li> <li>• ↓ Father sensitivity or ↓ involvement with father or ↑ father intrusiveness: maternal depression negatively impacted family cohesion</li> <li>• Father intrusiveness: ↓ child involvement with father, ↓ family cohesion</li> <li>• ↑ family cohesion: ↑ family rigidity</li> </ul>	<ul style="list-style-type: none"> <li>• Unmeasured: psychological, genetic or contextual factors</li> <li>• Not observed longitudinal father-infant interactions in 1st year of life</li> <li>• Extreme-case design</li> <li>• Not included anxiety disorders</li> <li>• Not tested other family constellations</li> </ul>
Waters et al. <sup>29</sup>	Belgium	157	3-year longitudinal study (4th-, 5th-, 6th-grade) yearly laboratory visits Apr/13 – Sep/2016	9 - 13 years in the first wave, 4-wave - each year	SEM	<ul style="list-style-type: none"> <li>• Childhood Attachment Interview</li> <li>• ASA (Childhood, Adolescent, Adult)</li> <li>• ALEQ</li> </ul>	<ul style="list-style-type: none"> <li>• Stability of secure base script knowledge</li> <li>• Convergent validity of secure base script</li> </ul>	<ul style="list-style-type: none"> <li>• Daily hassles (minor &amp; frequently occurring stressful life events) but not major (more severe &amp; infrequent) predicted change in script knowledge</li> <li>• Secure base script knowledge: stable across all four waves</li> </ul>	<ul style="list-style-type: none"> <li>• Same measure administered across waves: may have inflated stability coefficients</li> <li>• Number of time points collected prevented from exploring more complex developmental dynamics of stability of attachment security</li> </ul>
Khafi et al. <sup>30</sup>	USA	193	Community-based child development centers and preschools	Preschool children to first graders	ANOVA	<ul style="list-style-type: none"> <li>• EOI FMSS</li> <li>• TOF</li> <li>• VBD-WPPSI-III</li> <li>• PSI</li> <li>• SES</li> <li>• SILS</li> </ul>	<ul style="list-style-type: none"> <li>• Behavior problems from preschool to first grade</li> </ul>	<ul style="list-style-type: none"> <li>• Statements of attitude and self-sacrifice/overprotection in FMSS fulfilling EOI criteria: ↑ EXT</li> <li>• Effect of Statements of attitudes on EXT for boys</li> </ul>	<ul style="list-style-type: none"> <li>• Limited assessment of INT</li> <li>• Sample size: limited to differ ethnicity</li> </ul>
Wang et al. <sup>55</sup>	USA	4,898	Children and mothers	3-15	SEM	<ul style="list-style-type: none"> <li>• NCP</li> <li>• NCE</li> <li>• 12-item scale from CDS</li> <li>• Exposure to ACE</li> <li>• Adolescents' Behavior</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescents' behavior problems</li> <li>• Adolescents' delinquency</li> <li>• Adolescents' social skills</li> </ul>	<ul style="list-style-type: none"> <li>• Neighborhood collective efficacy: ↑ adolescents' delinquency &amp; behavior problems, and ↓ social skills</li> <li>• Maternal parenting stress &amp; exposure to ACEs: mediators between neighborhood characteristics and adolescents' outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Self-report bias</li> <li>• Single time point outcomes</li> <li>• Roles of fathers and other caregivers, peers and school: not considered</li> <li>• Final model explained modest portion of the variance in each dependent variable, suggesting that additional factors not considered in the model contribute to adolescent outcomes</li> </ul>

						<ul style="list-style-type: none"> <li>Problems self-report scale</li> <li>Adapted scale of NLSAH               <ul style="list-style-type: none"> <li>Self-report SSRS</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>Parenting stress mediated relations between neighborhood poverty &amp; collective efficacy and adolescents' outcomes</li> <li>Predictors of adolescents' behavior problems: maternal parenting stress, exposure to ACEs, neighborhood collective efficacy, and mothers' cohabitation status.</li> <li>Predictors of adolescents' delinquency: mothers' marital status, ACEs, mothers' age, and child sex.</li> <li>Predictors of adolescents' social skills: collective efficacy, maternal education, marital status, and parenting stress.</li> </ul>	
Guerrero et al. <sup>56</sup>	USA	3,630	Families at birth and ages 1, 3, 5, and 9	1-9	SEM	<ul style="list-style-type: none"> <li>CBCL</li> <li>CIDI-SF</li> <li>CFSS</li> <li>Questions about homelessness risk</li> </ul>	<ul style="list-style-type: none"> <li>Child INT &amp; EXT</li> <li>Maternal depression</li> <li>Food insecurity</li> <li>Housing instability</li> </ul>	<ul style="list-style-type: none"> <li>↑ Maternal depression at Years 1 &amp; 3: ↑ child problem behaviors at Year 9</li> <li>Food insecurity &amp; housing instability at Year 5: partly mediated relation between maternal depression at Year 3 and EXT at Year 9</li> <li>Food insecurity at Year 5 mediated relation between maternal depression and INT or INT &amp; EXT</li> </ul>	<ul style="list-style-type: none"> <li>Sample attrition</li> <li>Missing measurements</li> <li>Assessment bias</li> <li>Instrument limitations</li> <li>Food insecurity measurement</li> </ul>
Mason et al. <sup>57</sup>	USA	313	Preschool-age children and their parents and teachers	3-5	SEM	<ul style="list-style-type: none"> <li>Working memory, inhibitory control &amp; cognitive flexibility</li> <li>WJ-III Brief Intellectual Assessment subtests</li> <li>LISRES</li> <li>SWPS</li> <li>EC-HOME</li> <li>Questions of parent substance use</li> <li>Questions of adaptive &amp; maladaptive functioning in middle childhood</li> </ul>	<ul style="list-style-type: none"> <li>Adaptive &amp; maladaptive functioning in middle childhood</li> </ul>	<ul style="list-style-type: none"> <li>↑ socio-familial stress, parent smoking, &amp; male sex: ↑ maladaptive &amp; ↓ adaptive functioning in middle childhood</li> <li>↑ EC and FCA: ↓ maladaptation &amp; ↑ adaptation in middle childhood</li> <li>Socio-familial stress &amp; parent smoking: ↓ FCA</li> <li>Socio-familial stress factors predicted:               <ul style="list-style-type: none"> <li>FCA more strongly than EC</li> <li>FCA with ↑ parent social stress and financial stress and ↓ household stress</li> </ul> </li> <li>Predictors of maladaptive functioning: EC and FCA, along with parent social stress and sex</li> <li>Predictors of adaptive functioning: FCA, parent social stress &amp; sex</li> <li>Mediation for socio-familial stress, sex, and parent smoking on both maladaptation &amp; adaptation through FCA</li> </ul>	<ul style="list-style-type: none"> <li>Limitations in sample characterization</li> <li>Modeling strategy limited inclusion of additional intervening variables due to number of parameter estimates and sample size</li> </ul>
Davies et al. <sup>58</sup>	USA	235	Mothers, fathers, and their kindergarten children	Wave 1: average age of 6 years	SEM	<ul style="list-style-type: none"> <li>CBCL</li> <li>SDQ</li> <li>IPST</li> <li>SCID</li> </ul>	<ul style="list-style-type: none"> <li>Interparental conflict history composite</li> </ul>	<ul style="list-style-type: none"> <li>Childhood interparental conflict moderated link between recent interparental conflict and adolescents' negative emotional reactivity</li> </ul>	<ul style="list-style-type: none"> <li>Limitations in sample characterizations</li> <li>Demographic bias</li> <li>Measurement of schemas at a single time point</li> <li>Effect sizes: modest to moderate</li> </ul>

				Wave 2: average age of 13 years		<ul style="list-style-type: none"> <li>• FPST</li> <li>• SSB-A</li> </ul>	<ul style="list-style-type: none"> <li>• Contemporaneous interparental conflict composite</li> <li>• Adolescent emotional reactivity to family conflict composite</li> <li>• Youth psychological problems composite</li> <li>• Adolescent negative schemas about mild and intense family conflicts</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescents with ↑ interparental conflict during childhood: ↑ negative emotional reactivity to family conflict</li> <li>• Adolescents exposed to ↑ recent interparental conflict: ↑ negative emotional reactivity irrespective of their interparental conflict history</li> <li>• Emotional reactivity to family conflict predicted psychological problems in adolescents</li> <li>• Negative schemas activated by mild family conflicts partially mediated association between childhood interparental conflict &amp; negative emotional reactivity to family conflict in adolescence</li> </ul>	<ul style="list-style-type: none"> <li>• Deficit in exploring biological or genetic factors</li> </ul>
Ferreira et al. <sup>59</sup>	Portugal	214	Children and their parents and teachers	3-6	SEM	<ul style="list-style-type: none"> <li>• 6-items of WFCS</li> <li>• PRQ-Preschool Form</li> <li>• SSRS</li> <li>• STRS</li> </ul>	<ul style="list-style-type: none"> <li>• Work-family conflict</li> <li>• Maternal relational frustration</li> <li>• Child social skills</li> <li>• Teacher-Child conflict</li> </ul>	<ul style="list-style-type: none"> <li>• Mothers: moderate levels of work-family conflict &amp; maternal relational frustration in different time points</li> <li>• ↑ maternal relational frustration: ↓ child self-control</li> <li>• Child self-control:                             <ul style="list-style-type: none"> <li>○ negatively associated with teacher-child conflict across time points</li> <li>○ mediate relations between maternal relational frustration and teacher-child conflict</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Descriptive nature of data</li> <li>• Causal modeling</li> <li>• Autoregressive cross-lagged panel models: limitations in disentangling between-person and within-person variations</li> <li>• Limitations in modeling strategies</li> <li>• Unconsidered factors</li> <li>• Shared method bias</li> <li>• Generalization limitations</li> </ul>
Yoon et al. <sup>60</sup>	USA	771	Adolescents from NSCAW-II	11-17	MLR	<ul style="list-style-type: none"> <li>• CBCL + YSR</li> <li>• CDI</li> <li>• SSRS</li> <li>• LSDQ</li> <li>• WJ-III</li> <li>• DFSCA</li> <li>• VEX-R</li> <li>• DPAS</li> <li>• Abridged Community Environment Scale</li> </ul>	<ul style="list-style-type: none"> <li>• INT &amp; EXT domains</li> <li>• Social Domain</li> <li>• Cognitive Domain</li> <li>• Resilient functioning of adolescents over time</li> </ul>	<ul style="list-style-type: none"> <li>• Moving from less to greater resilience:                             <ul style="list-style-type: none"> <li>○ Early adolescents: ↑ odds</li> <li>○ Predicted by better parent-child relation quality</li> </ul> </li> <li>• Remaining in greater resilience:                             <ul style="list-style-type: none"> <li>○ ↑ odds: early adolescents, better parent-child relation quality and neighborhood safety</li> <li>○ ↓ odds: physical abuse history</li> </ul> </li> <li>• Moving from greater to less resilience: early adolescents: ↓ odds</li> <li>• Affiliation with deviant peers: ↓ odds</li> </ul>	<ul style="list-style-type: none"> <li>• Generalization limitations</li> <li>• Selection bias</li> <li>• Self-reported data</li> <li>• No differentiation on specific maltreatment subtypes</li> <li>• Resilience measures</li> <li>• Limited temporal context</li> </ul>
Marçal et al. <sup>61</sup>	USA	2,719	Fragile Families & Child Well-being Study (unmarried parent)	Waves at age 5, age 9 and age 15	SEM with confirmatory factor analysis	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• Construct housing insecurity</li> <li>• Parent-Child Conflict Tactics Scale</li> </ul>	<ul style="list-style-type: none"> <li>• Adolescent behavior</li> <li>• Childhood housing insecurity</li> <li>• Harsh parenting</li> </ul>	<ul style="list-style-type: none"> <li>• Housing insecurity predicted:                             <ul style="list-style-type: none"> <li>○ Adolescent anxious/depressive behaviors</li> <li>○ Rule-breaking, aggressive, and anxious/depressive behaviors via psychological aggression in parenting</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Not all differential pathways or compounding impacts could be accounted for</li> <li>• Not included a general population comparison group: not possible to determine whether the level of adolescent aggression differed from typically developmental stage.</li> </ul>
Nuttall et al. <sup>62</sup>	USA	235	kindergarten-aged children's families	Wave 1: average age 6.0 years	LCA	<ul style="list-style-type: none"> <li>• CBCL</li> <li>• MSSTB</li> <li>• CRPBI</li> <li>• CBS</li> </ul>	<ul style="list-style-type: none"> <li>• Child INT &amp; EXT</li> <li>• Children's caregiving reactions</li> </ul>	<ul style="list-style-type: none"> <li>• 88% children reported positive caregiving responses in a task of interparental conflict scenarios</li> </ul>	<ul style="list-style-type: none"> <li>• Children's actual caregiving responses not directly captured, potentially limiting validity</li> </ul>

				Wave 2: 6.97 years Wave 3: 7.99 years		<ul style="list-style-type: none"> <li>• OPS</li> </ul>	<ul style="list-style-type: none"> <li>to interparental conflict</li> <li>• Children's representations of caregiver competence</li> <li>• Parental psychological autonomy support versus restriction</li> <li>• Prosocial behavior</li> <li>• Interparental conflict</li> </ul>	<ul style="list-style-type: none"> <li>• 2 latent classes: 1) parentification= ↑ child caregiving responses, ↑ parental control and ↓ caregiving competence, 2) non-parentification= ↓ child caregiving, ↑ caregiving competence, and ↓ control</li> <li>• Growth Mixture Model with adjustment trajectories: shifts in class solutions. Parentification = 30% of the sample.</li> <li>• Parentification class (vs. non-parentification): <ul style="list-style-type: none"> <li>○ ↑ initial EXT but ↓ more rapidly</li> <li>○ ↑ initial INT that ↑ more rapidly</li> <li>○ ↓ prosocial behavior, while non-parentification class showed ↑ over time</li> </ul> </li> <li>• Children in parentification class: resilience &amp; normative functioning despite experiencing family parentification risk <ul style="list-style-type: none"> <li>○ Familial pattern of parentification: mothers with poorer parenting than fathers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of parentification did not clearly distinguish between emotional and instrumental forms</li> <li>• Assessment did not differentiate whether caregiving reactions were directed towards the mother or the father, failing to capture potential differences in familial responses to parentification</li> <li>• Two-parent nature of sample: may have influenced results</li> <li>• Low parentification scores</li> <li>• Small sample size</li> </ul>
Rinne et al. <sup>63</sup>	USA	Study 1: 362 Study 2: 125	Study 1: women Study 2: mother-child pairs	0-5	LCA	<ul style="list-style-type: none"> <li>• EPDS</li> <li>• CES-D</li> <li>• CBQ</li> <li>• NTCB</li> </ul>	<ul style="list-style-type: none"> <li>• Trajectories of maternal depressive symptoms</li> <li>• Child temperament</li> <li>• Child executive function</li> </ul>	<ul style="list-style-type: none"> <li>• Study 1 - Trajectories of maternal depressive symptoms: <ul style="list-style-type: none"> <li>○ 4 trajectories classes: low-stable, persistent, increasing, and decreasing</li> <li>○ Changes in symptoms: linked to maternal ratings of child temperament &amp; performance on executive function task</li> <li>○ Changes in symptoms: correlation with differences in child self-regulation</li> </ul> </li> <li>• Study 2 - Associations with offspring developmental outcomes in child follow-up: <ul style="list-style-type: none"> <li>○ Children of women with ↓ symptoms: ↓ maternal ratings of effortful control at age 4</li> <li>○ Children of women with ↑ symptoms: ↓ inhibitory control task at age 5</li> </ul> </li> <li>• Preconception and postpartum depressive symptom: ↓ effortful control and inhibitory control outcomes, respectively</li> </ul>	<ul style="list-style-type: none"> <li>• Small group sizes within some trajectories due to the majority of women exhibiting low-stable symptoms</li> <li>• Participation bias</li> <li>• Variability in time interval between the nearest preconception visit and pregnancy</li> <li>• Differences among rating scales used for depressive symptoms: required standardization for comparison across measures</li> <li>• Maternal depressive symptoms in first trimester of pregnancy as well as between postpartum and early childhood: not assessed</li> </ul>
Bussemakers et al. <sup>64</sup>	UK	18,818	Children born 2000–2002	5-14	MLR	<ul style="list-style-type: none"> <li>• SDQ</li> <li>• Age-Appropriate Vocabulary Tests</li> <li>• Family Dysfunction Variables</li> </ul>	<ul style="list-style-type: none"> <li>• Behavioral development</li> <li>• Cognitive development</li> </ul>	<ul style="list-style-type: none"> <li>• Children with household dysfunction: <ul style="list-style-type: none"> <li>○ more behavioral problems</li> <li>○ already had ↓ verbal ability and ↑ behavioral problems prior to the onset of dysfunction</li> </ul> </li> <li>• Household dysfunction: <ul style="list-style-type: none"> <li>○ ↓ parents' financial resources</li> <li>○ ↑ odds of falling into poverty</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Absence of unobserved factors</li> <li>• Selection bias</li> <li>• Limited measurements</li> <li>• Limited generalizability</li> <li>• Self-report</li> <li>• Longitudinal measurement limitations</li> <li>• Lack of detailed exploration</li> </ul>

Barnhart et al. <sup>65</sup>	USA	5,510	Youth participants	9-10	PA SEM	<ul style="list-style-type: none"> <li>• Financial Resources Measures</li> <li>• CBCL</li> <li>• YSR/BPM</li> <li>• PALES</li> <li>• MFES/FCS</li> </ul>	<ul style="list-style-type: none"> <li>• Child INT &amp; EXT</li> <li>• ACEs</li> <li>• Family conflicts</li> </ul>	<ul style="list-style-type: none"> <li>• ↓ family SES:                         <ul style="list-style-type: none"> <li>○ predicted ↑ INT</li> <li>○ directly associated with ↑ ACEs</li> </ul> </li> <li>• ACEs: associated with ↑ INT &amp; ↑ EXT</li> <li>• Indirect effects between family SES, ACEs, and INT: stronger at ↑ levels of family conflict</li> <li>• Family conflict moderated relation between family SES and ACEs, as well as association between family SES and INT</li> </ul>	<ul style="list-style-type: none"> <li>• Secondary data limitation</li> <li>• Family environment assessment: limited to negative attributes</li> <li>• No control for ACEs or psychopathology at the beginning of the study.</li> <li>• Limitations in family SES measure</li> <li>• Discrepancies in the responses of parents and youths regarding symptoms and family conflicts</li> </ul>
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Note. Table prepared by the authors.

## Discussion

We reviewed 43 articles (13 cross-sectional and 30 longitudinal) to assess which stress and resilience factors in the family environment were associated with child development; most of the studies were conducted in the United States. The most frequently used instruments to assess child general psychopathology were CBCL and SDQ; and to evaluate child depressive symptoms, CES-D and CDI. Multiple logistic regression and structural equation modeling were the most common statistical analyses used in cross-sectional and longitudinal studies. An association between parental depression with youth internalizing symptoms and behavioral problems was reported in 16 (37.21%) studies.<sup>1,2,6-8,17,24,28,30,49,50,53,55,56,60,64</sup> In the same line, positive parenting practices were positively associated with improved child development. A cohesive home environment was associated with low child stress and good socio-emotional development.<sup>5,14,18,24,49,57,60</sup>

Parental mental health problems, especially maternal depression, were associated not only with child mental health problems but also with child developmental delays.<sup>2,5,6,8,11,14,17,25-28,49,50,53,54,56,63,64</sup> Maternal postnatal depression affects children both through direct mother-infant interaction but also due to reduced caregiving for the child.<sup>2</sup> In instances where maternal depressive symptoms were more pronounced, mothers who conveyed fewer primary control and secondary control coping messages were associated with children displaying elevated levels of internalizing symptoms during a task involving parental coping messages. This task was centered around the observation of discussion-based peer stress interactions.<sup>53</sup> Rinne et al.<sup>63</sup> demonstrated that maternal depressive symptoms presented four trajectories classes: low-stable, persistent, increasing, and decreasing. Offspring of

mothers exhibiting escalating symptoms scored lower on an inhibitory control task at the age of five.

Mothers with major depression might present depressed and irritable mood, low concentration, and psychomotor alterations; therefore, these mothers could be hostile, pay little attention, and be slow to respond to their children.<sup>27</sup> Observational studies of depressed mothers showed that these mothers had less affection and less interaction with their children.<sup>27,28,50</sup> Moreover, unpredictable maternal mood and behavior seemed to be associated with risk for child mental health problems.<sup>31</sup> Indeed, Vakrat et al.<sup>28</sup> reported that maternal depression was associated with low parent sensitivity and poor child social engagement with parents, as well as less family cohesion.

In our review, we identified that parents who presented poor parenting abilities had children with more internalizing and externalizing symptoms, like worse communication, low emotional expression, insecurity, low social engagement, less organization and hygiene, inattention, physical aggression, and poor developmental outcomes and well-being.<sup>2,6,7,8,11,19,24,26,28,30,49,52,54,57,58,62,64</sup> Interventions focusing on parental mental health could lead to better child developmental outcomes. A Canadian population-based study found that identifying and supporting mothers who experience high anxiety symptoms in the perinatal period may mitigate the risk of developmental delays.<sup>32</sup> A recent clinical trial showed the effectiveness of an intervention that focused on sleep, routines, and self-care in sustaining remission of maternal depression. This positive effect lasted for at least two years after childbirth.<sup>33</sup> In the same direction, a scoping review about interventions offered to at-risk families, such as adolescent mothers and parents with severe mental health problems, in the first year of life concluded that they improved child behavior, parent-



child relationship, and maternal sensitivity post-intervention. However, this review found no improvement in child cognitive development or internalizing or externalizing symptoms.<sup>34</sup> According to a German clinical trial, multisystemic family therapy for child abuse and neglect alleviated parental psychological distress even six months after the intervention was finished.<sup>35</sup> This suggests that interventions can have a positive impact on child development.

A current theme linked to poor parenting abilities is "phubbing", the behavior of paying more attention to one's mobile device, particularly during social interactions, rather than giving full attention to the people present. Lv et al.<sup>54</sup> report that maternal phubbing had a detrimental impact on emotional and behavioral issues in young children, highlighting a negative association between maternal phone use during interactions and the emotional well-being of the children. Phubbing disrupts mother-child bonds, which is a mediating factor in healthy child development, potentially leading to insecure attachments and subsequent behavioral problems in children. Also, daily hassles, minor and frequently occurring stressful life events, predicted change in the secure base script (i.e., the memory of essential attachment experiences in childhood with the binding figure), and used in new attachment relationships, e.g., caregiving and romantic relations.<sup>29</sup>

Positive parenting practices and positive parental feelings towards pregnancy have been positively associated with increased child's resilience, communication, and social development.<sup>14</sup> There is a dose-response relationship between positive parenting practices and the child's likelihood of experiencing developmental, social, or behavioral delays.<sup>18</sup> Storytelling and singing to the child, for instance, were considered as positive parenting practices and associated with better child behavioral development, mainly if they occurred daily.<sup>14,18</sup> This is in line with Waters

et al.<sup>29</sup> study, demonstrating the importance of essential attachment experiences in childhood. Positive parental feelings included maternal engagement with appropriate child-centered activities, positive perceptions of the child, positive parenting style, active parental coping efforts, reflecting a strong emotional attachment to the child, family cohesion, and enjoyment of the role as a parent.<sup>14,20,24,42,49,60</sup> Nonverbal child communication was also a predictor of resilience, suggesting that the more the child communicates effectively in a nonverbal way, the more likely they were to attain normative behavioral development. Savage-McGlynn et al.<sup>14</sup> hypothesized that more nonverbal communication is expressed following positive maternal feelings towards their children. Examples of non-verbal communication include pointing to an exciting object, waving unprompted at someone, extending arms to be picked up, shaking head “no,” nodding head “yes,” opening and closing hand to ask for an item, and blowing a kiss from a distance, which is not as often observed among children of depressed mothers. Researchers and healthcare professionals should share information about these positive parenting practices and their impact on a child’s development to increase adherence to these practices. Furthermore, resilience was associated with early adolescents, better parent-child relation quality and neighborhood safety, while physical abuse history and affiliation with deviant peers decreased the odds of remaining resilient.<sup>60</sup>

Also, poorer development delays may be significantly associated with the vulnerable social environment, such as poverty level, immigrant mother, and parents’ educational status, as referenced by studies carried out in developed countries.<sup>18,22</sup> Housing insecurity predicted anxious and depressive behaviors and decreased verbal ability in adolescents.<sup>61,64</sup> It is well established in the literature that improving neighborhood conditions<sup>36,37</sup> and socioeconomic status of the population,<sup>38-39</sup> as well

as incentivizing strategies to increase social integration and cohesion<sup>40,41</sup> can improve mental health outcomes, particularly among children.

Findings from our scoping review showed that a cohesive home environment was associated with low child stress and good socioemotional development.<sup>5,20,24,28</sup> Family environments with the chronic strain and stress,<sup>25</sup> mainly between parents, were associated with worse relationships and future depressive symptoms among children.<sup>16</sup> Marital problems (e.g., divorce or conflicts or non-supportive co-parenting) were also associated with low child development, internalizing symptoms, behavioral problems, and harsh parenting.<sup>5,15,50,57,58,62,64</sup> Moreover, using the Five-Minute Speech Simple scale, which evaluates the parent-child relationship's emotional climate in the caregiver speech, parental self-sacrifice and overprotection were associated with boys' externalizing symptoms.<sup>30</sup> In fact, all these factors seem to play a role in the children outcomes. Maternal parenting stress and exposure to Adverse Childhood Experiences serve as mediators between neighborhood attributes and outcomes among adolescents. Parenting stress played a mediating role in the connections between neighborhood poverty and collective efficacy and outcomes in adolescents. Predictors of adolescents' behavior problems were maternal parenting stress, exposure to Adverse Childhood Experiences, neighborhood collective efficacy, and mothers' cohabitation status.<sup>55</sup> All these studies show that a cohesive family creates a more supportive environment, which decreases the chances of socioemotional developmental delays in the children.

Another marker of the family is their caregiver characteristics. Having an immigrant mother with low educational attainment was associated with delays in child development in Canada.<sup>22</sup> Likewise, delayed development has also been observed with children raised only by their grandparents in one study in Thailand,

that has not been evaluated for its quality.<sup>21</sup> A trial to evaluate therapy interventions for grandparents raising children improved grandmothers' psychological distress, emotional expressions and led to better development of parenting practices and therefore reduced internalizing and externalizing symptoms among their grandchildren between ages 4 and 12.<sup>43</sup>

Healthcare professionals and teachers could be essential catalysts to promote the healthy socioemotional development of children.<sup>35,57,59</sup> These professionals must establish a solid parent-professional partnership with family-centered strategies. This bond may enable families to request these professionals' support when needed, and the professionals can assist families who are dealing with developmental issues, such as difficulties in social interaction or emotional communication.<sup>44</sup> Given that interventions on parental mental health could lead to better child developmental outcomes, early identification of such issues should focus on public health, **as early child care has been demonstrated to positively impact children's cognition, socioemotional development, and behavior.**<sup>45</sup>

Despite the insights gained from the literature review, some limitations warrant discussion. One limitation was the inclusion of only publications written in English and Portuguese. Although this is a limitation, previous research shows that language restriction does not alter the main findings of systematic reviews.<sup>46,47</sup> Another limitation was that our search strategy may have lacked sensitivity, particularly by omitting significant search terms such as "mother" or "father", but we checked all references in the selected articles and we contacted experts in the field who suggested additional articles. Further limitations were the heterogeneity and lack of standardization of the articles reviewed regarding the statistical analyses used in each study, the small sample size of the majority of articles, and the fact that

the definitions of “resilience” and “family cohesion” varied largely among the studies. Another limitation was the broad spectrum of our search. Although this makes our work lose a more specific look at the issue, we aimed to privilege the bigger picture of the current literature scenario on this topic, raising a more comprehensive discussion of potential gaps identified. Finally, an additional limitation was not using any bias or methodological quality scale to evaluate the articles included.

In conclusion, this study suggests that the family environment is an essential determinant of child socioemotional development. This review's strength is that we produced a synthesis of the main findings on the impact of stress and resilience on child development, the relationship between parental mental health problems, particularly maternal depression, and youth internalization and externalization problems, as well as the significant importance of positive parenting practices in promoting healthier child development. Moreover, a cohesive home environment was associated with low child stress and good socioemotional development. Vulnerable social environments, such as poverty level and housing insecurity may be linked to child mental health problems. Promoting a better family dynamic and improving family cohesion and parenting abilities could benefit the child's socioemotional development. Also, increasing family and child resilience increases the quality of life within family units. Therefore, this is an entire area of study and intervention for mental health professionals. Future studies are needed to identify public policy models that address the family environment and promote social and health improvements. Future research could also shed light on the factors underlying families' resilience and stress starting in early childhood.

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